

# Rocky Flats Environmental Technology Site

## 1-C91-EPR-SW.01

### REVISION 3

# CONTROL AND DISPOSITION OF INCIDENTAL WATERS

APPROVED BY: /s/	/ Alec Cameron	/ 6/27/03
Alec Cameron, Kaiser-Hill Site Services	Print Name	Date

Responsible Organization: RFCSS-Surface Water Operations  
 Effective Date: July 1, 2003

Concurrence by the following disciplines is documented on the document history file:

- RFCSS – Surface Water Operations
- RFCSS – Health and Safety
- RFCSS - Utilities Operations
- Analytical Services Division

## USE CATEGORY 4

XX

ISR review is not required.

Reviewed for Classification/UCNI

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## 1. PURPOSE

To protect water quality in streams and local waterways and to meet the National Pollutant Discharge Elimination System (NPDES) Permit and other regulatory requirements, this procedure provides for the control and disposition of incidental waters originating from the following Rocky Flats Environmental Technology Site (RFETS) sources and activities:

- Construction activities that require excavation below the ground water table and subsequent ground water pumping.
- Natural collection and subsequent pumping of precipitation and storm water runoff in excavations, pits, trenches, ditches, or depressions.
- Collection of water in secondary containments, process waste valve vaults, electrical vaults, or manholes that require pumping.
- Discharge of water from the fire suppression system when the system has been breached inside a Radiological Buffer Area or Contamination Area.
- Other sources of water requiring disposal or management.

**NOTE:** *The procedure Environmental Controls on Incidental Sprinkler Water Discharge, 4-W85-FS-1206, is utilized to direct the control and disposition of fire suppression system water discharges during routine system testing and maintenance. This procedure is adequate to address Surface Water concerns and no further exemption requests are required, provided the system has not been breached within a Radiological Buffer Area or a Contamination Area.*

Waters that originate from a potable water source or from precipitation events and are collected in areas that have no potential for contamination may be provided a written *exemption*. Areas with the potential for contamination include Individual Hazardous Substance Sites (IHSS), material and waste storage or handling areas, and high traffic areas.

For each incidental water, consideration will be given to treatment versus sampling and analysis and/or evaluation for discharge to the ground or storm sewer system when determining the appropriate disposition. This decision will be based primarily on the characteristics of the water. However, practical considerations such as costs of sampling, analysis, and transportation; availability of transportation; capacity of treatment facilities; and project delays may also be considered.

## 2. OVERVIEW

The effective operation of the RFETS involves various water management activities that may result in incidental waters (also termed "non-storm waters" by the RFETS NPDES

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Permit) requiring on site treatment or discharge to storm drains or the ground. Incidental waters may originate as precipitation, surface water, ground water, utility water, process water, or wastewater. Such waters have the potential of contacting contaminants present at concentrations exceeding acceptable levels. Such levels are based on those prescribed in one or more of the following: Colorado State Water Quality Standards, the RFETS NPDES Permit, the Rocky Flats Cleanup Agreement (RFCA, specifically, Attachment 5), and applicable or relevant and appropriate requirements defined by the U.S. Environmental Protection Agency or other regulatory agencies. The RFETS NPDES Permit provides specific limitations on the discharge of incidental waters to the RFETS Wastewater Treatment Plant (WWTP).

This procedure ensures that water originating from the activities and sources identified in Section 1, is properly controlled, contained, sampled and analyzed (if required), evaluated, and treated or discharged. This procedure is in agreement with the requirements of the RFETS NPDES Permit (CO-0001333, October, 2000) for the control and disposition of incidental waters.

### 3. DEFINITIONS

Incidental Water. Precipitation, surface water, ground water, utility water, process water, or wastewater collecting in one or more of the following areas:

- Excavation sites, pits, or trenches
- Secondary containments or berms
- Valve vaults
- Electrical vaults
- Steam pits and other utility pits
- Utility manholes
- Other natural or manmade depressions which must be de-watered
- Discharges from a fire suppression system which has been breached within a Radiological Buffer Area or a Contamination Area.

### 4. LIMITATIONS AND PRECAUTIONS

Incidental water samples may be collected in radiological areas or confined spaces. Before entering such an area, the Sampling Crew shall ensure that a Radiation Work Permit (RWP), Beryllium Work Form (BWF) and/or Confined Space Entry Permit, if required and appropriate, have been obtained for the area. The Sampling Crew shall be responsible for

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following all requirements of the permit, including donning specified Personal Protective Equipment (PPE). All members of the Sampling Crew entering the area shall have successfully completed any required training.

Incidental waters will be evaluated or characterized using process knowledge, to the extent practical, prior to sampling. If the incidental water is suspected of having a potentially significant concentration of a contaminant(s), the Sampling Crew will be informed by Surface Water Operations of the potential hazards and the appropriate precautionary actions.

If during the sampling of an incidental water, the Sampling Crew encounters hazardous conditions which had not previously been identified and addressed via JHA controls, the Sampling Crew SHALL stop work and immediately notify supervision and Surface Water Operations, and area management, if appropriate.

## 5. PREREQUISITE ACTIONS

None

## 6. RESPONSIBILITIES AND TRAINING

Responsible Program Managers/Managers described in this procedure must ensure all personnel are appropriately trained and qualified to perform the duties and responsibilities of assigned tasks.

### 6.1 Activity Coordinators

Contact the Surface Water Operations (SWOps) group when incidental water as described in Section 1, is encountered.

### 6.2 Activity Supervisors

- [A] Contact SWOps when an activity (e.g., construction) causes or results in the accumulation of water in an excavation area that needs to be managed.
- [B] Contact SWOps before the start of an excavation activity in which water requiring removal or management is *likely* to be encountered.

### 6.3 Analysis Laboratory

**NOTE:** *The Analysis Laboratory is determined by Analytical Services Division.*

Perform requested water analyses.

#### **6.4 Emergency Services**

Collect incidental water from fire suppression systems in appropriate containers/vessels to facilitate accurate sampling and analysis, when collection is required.

#### **6.5 Trucking Operations**

Provide equipment, vehicles and labor as necessary, to pump, contain, and transport incidental waters for treatment or disposal.

#### **6.6 Industrial Wastewater Operations**

Ensure that the following activities are performed as necessary:

- Obtain, transport, and deploy the necessary equipment to the field site
- Pump incidental water to a containment vessel
- Transfer incidental water to appropriate treatment facility

#### **6.7 ASD Analytical Support Services Crew**

Obtain required water samples as directed by Surface Water Operations.

#### **6.8 Surface Water Operations**

Determine whether the incidental water should be sent for treatment, or sampled and analyzed and/or evaluated for possible discharge to the ground.

If treatment of the incidental water is cost effective, practical and compatible with acceptance criteria, contact the Facility Manager of the appropriate treatment facility to coordinate transportation or discharge of the incidental water.

If the incidental water is to be sampled, determine appropriate sampling parameter requirements, receive and interpret test results and/or analytical results. Make decision on and obtain approvals for the disposition of the incidental water.

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Document the decision in the IW database and maintain database to track all of the IW control activities, including: pumping, containment, sampling, analytical results, transfers, storage, and final disposition - (treatment or discharge).

Maintain hardcopy files and database for the control and disposition of incidental waters.

## 7. INSTRUCTIONS

### 7.1 Identification of Incidental Waters

#### Identifying Individual

- [1] Notify immediate supervisor upon identification of a potentially new source of incidental water which requires control and disposition.

**NOTE:** *The SWOps contact made in Step 7.1 [2] should be made before the start of any new excavation work, if possible.*

#### Activity Coordinator or Supervisor

- [2] Contact Surface Water Operations, and submit an Incidental Water Discharge Request Form (Appendix 3) for the new incidental water.
- [A] Provide any pertinent information available that may enhance SWOps ability to evaluate IW water quality and/or determine the status of the new water, including: location, volume, suspected contaminants, and relevant historical information.

#### Surface Water Operations

- [3] Gather information about the water source, including a walk-down of the field site, as practicable.
- [4] Determine whether direct transfer of the water to a treatment facility is appropriate and practicable based on the following criteria:
- [A] If the incidental water can be adequately characterized utilizing historical and process knowledge, determine the appropriate treatment facility and obtain acceptance from the treatment facility manager without sampling and analysis of the water.



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performed and documented, and that any leaks or spills have been remediated.

- [9] IF the water source is exempt from the requirements of this procedure, THEN:
- [A] Notify the affected activity coordinator or supervisor.
  - [B] Notify the organization responsible for the affected area or system, if different from the IWIC initiator's organization.
  - [C] Ensure that any special conditions or requirements specified on the IWICER are met.
  - [D] Ensure disposition of the IWICER and all attachments are in accordance with Section 9, Records.
  - [E] Exit this procedure.
- [10] Determine the appropriate list of sample parameters necessary to characterize the incidental water. There is not a predetermined set of sample parameters for which each incidental water event must be sampled. It is the responsibility of Surface Water Operations to determine what minimal parameters are adequate and appropriate to properly characterize the incidental water. This determination should be made by identifying potential contaminant sources, utilizing resources such as the *Historical Release Report*, past sampling results, and process knowledge. Consultation with treatment facility managers may be advised for new sources to adequately characterize water prior to treatment. In the case of incidental water within secondary containment, it may be necessary to sample for the material stored in the primary containment.
- NOTE:** *The IW database provides access to historical information and process knowledge that can be useful in evaluating these waters.*
- [11] Notify the appropriate sampling crew of the need to sample the incidental water, and complete the Sampling section of the IWIC Form in the database.
- [12] Notify the initiating organization of the status of the incidental water if containment or monitoring requirements exist.
- [13] Record any additional comments on the IWIC Form in the database, as appropriate.

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## 7.2 Monitoring, Containment, and Collection of Incidental Waters

### Surface Water Operations

- [1] Coordinate with the initiating organization and ensure that Steps 7.2 [2] through 7.2 [5] are performed, as applicable.

### Activity Coordinator or Supervisor

- [2] Perform required containment and/or monitoring of the affected area or system in accordance with the instructions provided by Surface Water Operations.
- [3] **IF** desire to minimize excessive delays in work activities,  
**THEN** pump incidental waters to a Surface Water Operations-approved containment vessel for temporary holding until sampling and analysis can be completed, and the proper method of disposal can be determined.

### Fire Department

- [4] **IF** a fire suppression system is considered exempt, as indicated in 7.1 [8],  
**AND** there is no potential for contamination of the water,  
**THEN** discharge the fire suppression system to the ground to support testing and maintenance, as appropriate.
- [5] **IF** a fire suppression system is **NOT** considered exempt, as determined in 7.1 [8],  
**OR** there is a potential for contamination of the water,  
**THEN** pump incidental waters to a SWOps-approved containment vessel for holding until sampling and analysis can be completed, and the proper method of disposal can be determined.

## 7.3 Sampling of Incidental Waters

### Activity Coordinator or Supervisor

- [1] Coordinate with SWOps to ensure that the following water is independently sampled and analyzed to determine suitability for discharge:
- Excavation sites, pits, or trenches
  - Secondary containments or berms
  - Valve vaults
  - Electrical vaults

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- Steam pits and other utility pits
- Other natural or manmade depressions which must be de-watered
- Any other source of water requiring disposition.

Surface Water Operations

- [2] Assist the designated sampling crew with the sampling of the incidental water, as necessary.
- [3] **IF** the activity or source of the incidental water is in or near an area of known or suspected contamination [such as a RCRA Storage Unit or an IHSS or groundwater plume area], or in an area of unknown history, **THEN** determine if samples to support additional chemical analyses need to be collected.

In this case, the analyses may be performed by an RFETS-approved contract laboratory.

Analytical Services Division

- [4] Dispatch a sampling crew upon request by SWOps to perform field tests and collect requested incidental water samples.
- [5] Prepare the incidental water samples in accordance with procedure ASD-003, *Identification System for Reports and Samples* or ST-ASI4-SOP001, *Waste Characterization Sampling* as appropriate. Ensure that representative samples are collected for the analytes specified by SWOps.
- [6] Transport the samples to one of the following laboratories, as appropriate, in accordance with applicable chain-of-custody and transportation requirements for such materials:
- General Laboratory (On-site Laboratory).
  - Canberra Mobile Lab Services (CMLS).
  - ASD designated offsite laboratory if needed analyses are beyond the normal capabilities of the General Laboratory or CMLS.

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**7.4 Analysis of Incidental Water Samples**

Analytical Services Division

- [1] Ensure that incidental water samples are analyzed by qualified and approved laboratories for the parameters specified by SWOps, and utilizing appropriate standard methods and/or procedures.
- [2] **IF** the activity or source of the incidental water is an area of known or suspected contamination (such as in or near a RCRA Storage Unit or an IHSS), or in an area of unknown history, **THEN** contact SWOps to determine if additional chemical analyses should be performed for specific known or likely water quality parameters.

In this case, the analysis may need to be performed by an RFETS-approved contract laboratory.

- [3] Promptly forward a copy of the incidental water sample analysis results to SWOps and to the activity coordinator or supervisor.

Surface Water Operations

- [4] Receive and interpret analytical results from the laboratory(ies), referring to the control limits summarized in the following table and any other standards or control limits established by Surface Water Operations, or by permit, agreement, or regulation, as applicable:

**Table 1. Water Quality Parameter Control Limits**

Parameter	Limit
pH	6.5 - 9.0
Nitrates as N	10 mg/L
Conductivity	0.700 mS/cm
Gross Alpha	40 pCi/L
Gross Beta	50 pCi/L

Any incidental water that exceeds the control limit for any parameter in Table 1, **OR** exceeds any other control limit established by regulation or by Surface Water Operations, shall be contained, and may NOT be discharged directly to the environment.

- [5] **IF** the sample analyses results are NOT within established limits, **AND** there is reason to suspect that either the sample may be un-representative or the analyses have failed QA/QC ,

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**THEN** arrange for re-sampling and/or reanalysis, if necessary.

- [6] **IF** further characterization of the incidental water is warranted,  
**THEN:**
- [A] Request through ASD that the appropriate laboratory perform additional analyses.
  - [B] Document any additional sampling parameter requirements on the IWIC Form in the database.
- [7] Complete the "Results" section of the IWIC Form in the database.
- [8] **IF** analyses of the incidental water indicate concentrations of constituents that exceed Resource Conservation & Recovery Act (RCRA) regulated limits,  
**THEN:**
- [A] Notify the appropriate Environmental Program Manager/Environmental Technical Advisor that the water may be a hazardous waste.
- [9] Determine the appropriate disposition of incidental water, and complete the "Disposition" section of the IWIC Form in the database.

**IF** the incidental water CANNOT be discharged to the environment,  
**THEN** determine the appropriate treatment facility (i.e., AWTS, Wastewater Treatment Plant, Building 891 Consolidated Water Treatment Facility) based upon the characteristics of the incidental water and the facility acceptance criteria. Contact the Operations/Facility Manager of the treatment facility to discuss concurrence.

## 7.5 Disposition of Incidental Waters

**NOTE:** *The affected activity coordinator or supervisor, with assistance from the Trucking Operations if needed, is responsible for discharging approved incidental water directly to the environment (that is, to the storm drain or to the ground).*

### Surface Water Operations

- [1] Contact the activity coordinator or supervisor to advise on the disposition of the incidental water in an appropriate manner (i.e., preferred discharge location and rate) depending on the analytical results.

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- [2] Provide activity coordinator or supervisor with a copy of the Incidental Water Report (see Appendix 2), which includes analytical results and disposition requirements.
- [3] File original copy of the IW Report in the current Surface Water Operations IW binder.

**Activity Coordinator or Supervisor**

- [4] **IF** the incidental water **IS APPROVED** to be discharged directly to the environment,  
**THEN:**
  - [A] **Contact Trucking Operations and Industrial Wastewater Operations for assistance in performing Steps 7.5 [4][B] and 7.5 [4][C], as necessary.**
  - [B] **Obtain and transport the necessary equipment to the field site.**
  - [C] **Discharge the incidental water to the storm drain or to the ground, at the location and rate directed by SWOps.**
- [5] **IF** the incidental water **IS NOT APPROVED** to be discharged to the environment,  
**THEN** contact the designated treatment facility manager.(see Section 7.4 [9])

**Industrial Wastewater Operations**

- [6] **IF** the incidental water **IS NOT APPROVED** to be discharged to the environment,  
**THEN:**
  - [A] **Coordinate with Trucking Operations, as required, to obtain and transport the necessary equipment to the field site.**
  - [B] **Pump the incidental water to a containment vessel(s).**
  - [C] **Transfer the water to the location specified in the completed IW Report.**
- [7] **Retain a hard copy of the completed IW Report.**

**7.6 Termination of an Incidental Water Control Exemption**

**Surface Water Operations**

- [1] **IF** a water source was previously determined to be exempt from treatment.

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AND SWOps has determined a need to terminate the exemption prior to the expiration date,  
**THEN:**

- [A] Notify the organization responsible for the affected area or system to terminate the exemption. This notification may be made by telephone.
  - [a] Document this notification in a memorandum, and forward a copy to the organization responsible for the affected area or system.
- [B] Process a new IWIC Form and IWCER as if a water source was a new source in accordance with this procedure.

## 8. POST-PERFORMANCE ACTIVITY

- [A] Once the incidental water is discharged, remove any containment monitoring.
- [B] Upon completion of activities required by this procedure, closeout any Radiation Work Permits or Confined Space Entry Permits that were required.

## 9. DISPOSITION OF RECORDS

### Surface Water Operations

- [1] Ensure that all of the incidental water control activities are properly documented in the IW Database.
- [2] Maintain hard copies of the IW Reports and IWCERs in accordance with 1-V41-RM-001, *Record Management Guidance for Records Sources*.

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## 10. REFERENCES

1-V41-RM-001, *Record Management Manual, Rev 2*, Rocky Flats Environmental Technology Site, Golden, Colorado, 12/31/2001.

IA IM/IRA, *Final Interim Measures/Interim Remedial Action Decision Document for Rocky Flats Industrial Area*, Rocky Flats Environmental Technology Site, Golden, Colorado, November 1994.

4-W85-FSS-1206, *Environmental Controls on Sprinkler Water Discharges*

ASD-003, *Identification System for Reports and Samples*

ST-ASI4-SOP001, *Waste Characterization Sampling*

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**Appendix 1**

**Incidental Water Exemption Request Form**

IW NUMBER:  DATE:   
CUSTOMER NAME:

**Water Identification**

LOCATION (BLDG):  VOLUME (Gal):   
LOCATION TYPE:   
LOCATION DESCRIPTION:

**Preliminary Evaluation**

1. Does water originate from a drinking water source or from precipitation events in areas that have no possibility of contamination?  YES  NO
2. Is the water source free of any credible potential of being contaminated?  YES  NO

**NOTES:** [A] IF either question above is answered NO, THEN the incidental water may NOT be exempted from Procedure 1-C91-EPR-SW.01.  
[B] IF both questions above are answered YES, THEN the incidental water may be exempted from Procedure 1-C91-EPR-SW.01. Any restrictions specified below must be adhered to in order to maintain this Exemption.

**Disposition**

EXEMPTION APPROVED:  YES EXEMPTION DENIED  YES  
EXEMPTION APPROVAL PERIOD: Start Date:  Expiration Date

**RESTRICTIONS:** Notify SWOps (x4985) if any of the following occur:

- IF a spill/release occurs within or at the building, THEN immediately stop discharging the incidental water.
- IF operational activities or structural configuration changes occur within or at the discharging building. This includes transfer of the building for decommissioning and demolition activities.
- IF the incidental water no longer needs to be discharged.
- OTHER: \_\_\_\_\_

**NOTE:** Customer is responsible for contacting SWOps (x4985) if another Exemption is needed after this Exemption expires.

I certify that this form was prepared in accordance with Procedure 1-C91-EPR-SW.01. The information submitted is, to the best of my knowledge, true, accurate, and complete.

SWOps Preparer / Date

SWOps Reviewer / Date

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Appendix 2

INCIDENTAL WATER REPORT

CUSTOMER NAME:	<input type="text"/>	EXT:	<input type="text"/>
ORGANIZATION:	<input type="text"/>	PAGER:	<input type="text"/>
BLDG:	<input type="text"/>	VOLUME (gal):	<input type="text"/>

Identification

LOCATION (BLDG):	<input type="text"/>	IWIC NO:	<input type="text"/>
LOCATION TYPE:	<input type="text"/>	DATE:	<input type="text"/>
LOCATION DESCRIPTION:	<input type="text"/>		

EXEMPT? If YES, then the water is exempt from the requirements of Procedure 1-C91-EPR-SW.01. See attached Incidental Water Control Exemption Request.

Results

pH:	<input type="text"/>	Acceptable Range: 6.5 to 9.0*
NO3 as N (mg/L):	<input type="text"/>	Not to Exceed: 10 mg/L*
CONDUCTIVITY (mS/cm):	<input type="text"/>	Not to Exceed: 0.700 mS/cm*
GROSS ALPHA (pCi/L):	<input type="text"/>	Not to Exceed: 40 pCi/L*
GROSS BETA (pCi/L):	<input type="text"/>	Not to Exceed: 50 pCi/L*
OTHER CONTAMINANTS:	<input type="text"/>	

EVALUATION OF DATA:

\*Limits based on Colorado Water Quality Stream Standards/Best Management Practices

Disposition

METHOD OF DISPOSAL:	<input type="text"/>	START DATE:	<input type="text"/>
DESTINATION:	<input type="text"/>	END DATE:	<input type="text"/>
COMMENTS:	<input type="text"/>		

I certify that this document was prepared in accordance with Procedure 1-C91-EPR-SW.01. The information submitted is, to the best of my knowledge, true, accurate, and complete.

Surface Water Preparer / Date

Surface Water Reviewer / Date

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**Appendix 3**

**INCIDENTAL WATER DISCHARGE REQUEST FORM**

<b>SECTION 1: WATER IDENTIFICATION (to be completed by Requester)</b>					
Building	Room/Tank/Manhole:	Estimated Volume:			
Drums:	WEMS Numbers:	Charge Number:			
Does water have oil sheen? <input type="checkbox"/> Yes <input type="checkbox"/> No		Appearance/Color:		Solids Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Is water in Rad Area? <input type="checkbox"/> Yes <input type="checkbox"/> No		Area Posting:			
Suspected Contaminants/Pollutants: (Include MSDS)			Known Contaminants/Pollutants:		
List type of water, discharge location, etc.:					
Requested Discharge Dates: Start Date:			End Date:		
List special safety requirements (POD, RWP, RCT Support, PPE, etc.) for Sampling Team entry:					
To the best of my knowledge, the above Incidental Water is fully, properly and truthfully described and identified.					
Requester (Print Name)	Signature & Date	Extension	Pager	Fax	Company
<b>SECTION 2: SAMPLING RESULTS &amp; DISPOSITION (to be completed by Surface Water Operations)</b>					
<b>Test</b>	<b>Sampling Results</b>			<b>Limits</b>	
pH				6.5 to 9.0	
NO3 as N (mg/L)				Not to Exceed: 10 mg/L	
Conductivity (mS/cm)				Not to Exceed: 0.700 mS/cm	
Gross Alpha (pCi/L)				Not to Exceed: 40 pCi/L	
Gross Beta (pCi/L)				Not to Exceed: 50 pCi/L	
Metal Screen					
Volatile Organics Analysis					
Method of Disposal:	<input type="checkbox"/> To Ground or Storm Drain		<input type="checkbox"/> Building 995 (WWTP)		<input type="checkbox"/> Building 891 (CWTF)
Discharge Start Date:	Discharge End Date:			IW #:	
Exemption Request:	<input type="checkbox"/> Approved		<input type="checkbox"/> Denied		<input type="checkbox"/> N/A
Comments or Restrictions:					
Surface Water Operations Preparer			Date		
Surface Water Operations Reviewer			Date		
WWTP Supervisor/Manager			Date		
CWTF Facility Manager			Date		
<b>SECTION 3: DISCHARGE CERTIFICATION (to be completed by Requester)</b>					
Volume (if different than estimated in Section 1):					
Date discharge was completed:					
Comments (any changes or abnormalities from Sections 1 or 2):					
I certify the Incidental Water described above was discharged as per the instructions in Section 2 and no additional water, chemicals or known contaminants were added to the water prior to the discharge					
Requester (Print Name)	Signature & Date	Extension	Pager	Fax	Company

FIGURE 3-2 - JOB HAZARD ANALYSIS

WPF/Procedure No.: 1-C91-EPR-SW.01 Rev. 3	Title/Description: Control and Disposition of Incidental Waters	Date: 7/1/03
Company/Organization: RFCSS/Surface Water Operations	Location: Site	Page 1 of 2
Planner/Procedure Writer (Name / Signature / Date) Tad Moser <i>Tad Moser</i> 6/26/03	Criticality Safety (Name / Signature / Date) N/A	Engineering (Name / Signature / Date) N/A
Environmental (Name / Signature / Date) <i>S.M. NESTA</i> <i>S.M. NESTA</i> 6/30/03	Fire Protection (Name / Signature / Date) N/A	H&S (Name / Signature / Date) Doug Perryman <i>Doug Perryman</i> 6/27/03
Job Supervisor (Name / Signature / Date) Jennifer Meints <i>Jennifer Meints</i> 6/27/03	Material Control & Accountability (Name/Signature/Date) N/A	Nuclear Safety (Name / Signature / Date) N/A
Packaging & Transportation (Name / Signature / Date) N/A	Quality Assurance (Name / Signature / Date) N/A	Radiological Safety (Name / Signature / Date) <i>C Blake</i> / <i>C Blake</i> 6/30/03
Worker (Name / Signature / Date)	Security (Name / Signature / Date) N/A	Waste Operations (Name / Signature / Date) Ty Vess <i>Ty Vess</i> / 6-26-03
Other (Organization / Name / Signature / Date)	Other (Organization / Name / Signature / Date)	Other (Organization / Name / Signature / Date)
Other (Organization / Name / Signature / Date)	APPROVED: RM (Name / Signature / Date / Organization) Keith Motyl <i>Keith Motyl</i> / 07-01-03 / <i>Surf. Water Ops</i>	

Signature indicates participation in the JHA. RM approval indicates that the SMEs are competent to perform their function. RM approval also indicates that the controls are synergistic and the implementation of a control has not created or amplified another hazard.

NOTE: See the IWCP web page for the latest version of the electronic form.

### FIGURE 3-2 - JOB HAZARD ANALYSIS

#### Continuation Sheet

WPF/Procedure No.: 1-C91-EPR-SW.01 Rev. 3	Title/Description: Control and Disposition of Incidental Waters	Date: 7/1/03	
Company/Organization: RFCSS/Surface Water Operations	Location: Site	Page 2 of 2	
MAJOR JOB STEP	POTENTIAL HAZARD	REQUIRED CONTROLS	NOTES (OPTIONAL)
7.1 Identification of Incidental Waters	Slips, trips and falls during field investigation (if applicable).	Safety footwear (meeting ANSI Z41), avoid walking on loose, rocky, sloped or clearly unsafe areas.	
	Heavy equipment operation.	Maintain safe distance from equipment, utilize spotter.	
7.2 Monitoring, containment, and collection of Incidental Waters (if applicable to SWOps personnel).	Slips, trips and falls.	Safety footwear (meeting ANSI Z41), avoid walking on loose, rocky, sloped or clearly unsafe areas.	
	Rotating machinery and high pressure for certain types of pumping.	Machine guards, visual inspections of equipment, maintain distance from equipment when possible. Pressure awareness training.	
	Temperature extremes.	Protective clothing, frequent breaks, rotation of personnel.	
	Skin or eye contact with corrosive or toxic liquid.	Eyewash within immediate area and Class III eye protection (goggles and faceshield) required for liquids with pH<5 or pH>9.	
	Designated Beryllium area, or history indicates past presence of Beryllium materials or operation.	Beryllium Work Form (if applicable), proper level of Beryllium training for area in question.	
	Designated radiological area, or history indicates past presence of radioactive materials or operation.	Radiological Work Permit (if applicable), proper level of radiological training for area in question, RCT's.	
	Work being conducted in a soil contamination area, if applicable.	Radiological Work Permit (if applicable), proper level of radiological training for area in question, RCT's.	
	Heavy equipment operation.	Maintain safe distance from equipment, utilize spotter.	
Insects, snakes, mosquitos or other biting animals.	Appropriate protective clothing and awareness of potential hazards.		

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Company/Organization: RFCSS/Surface Water Operations		Location: Site	Page 2 of 2
MAJOR JOB STEP	POTENTIAL HAZARD	REQUIRED CONTROLS	NOTES (OPTIONAL)
7.3 Sampling of Incidental Waters	Hazards are covered by the JHA of the sampling group (also refer to CASSOP-003, "Waste Characterization During Sampling").	N/A for Surface Water Operations. Hazards are covered by JHA's or Health and Safety Plans of the sample team.	
7.4 Analysis of Incidental Waters	Waste generated from analysis and testing of water samples.	N/A for Surface Water Operations. Hazards are covered by JHA's or Health and Safety Plans of on-site and off-site laboratories.	
7.5 Disposition of Incidental Waters	Slips, trips and falls.	Safety footwear (meeting ANSI Z41), avoid walking on loose, rocky, sloped or clearly unsafe areas.	
	Rotating machinery and high pressure for certain types of pumping.	Machine guards, visual inspections of equipment, maintain distance from equipment when possible. Pressure awareness training.	
	Temperature extremes.	Protective clothing, frequent breaks, rotation of personnel.	
	Designated Beryllium area, or history indicates past presence of Beryllium materials or operation.	Beryllium Work Form (if applicable), proper level of Beryllium training for area in question.	
	Designated radiological area, or history indicates past presence of radioactive materials or operation.	Radiological Work Permit (if applicable), proper level of radiological training for area in question, RCT's.	
	Work being conducted in a soil contamination area, if applicable.	Radiological Work Permit (if applicable), proper level of radiological training for area in question, RCT's.	
	Heavy equipment operation.	Maintain safe distance from equipment, utilize spotter.	
	Skin or eye contact with corrosive or toxic liquid.	Eyewash within immediate area and Class III eye protection (goggles and faceshield) required for liquids with pH<5 or pH>9.	
	Sprains/pinch points.	Utilize proper lifting techniques. Obtain assistance with moving of heavy and/or awkward equipment. Wear leather gloves and safety boots.	

Note: the fourth column is not required, but may be used for comments, to identify the location of the controls, etc., if desired.

## HAZARD AND DISCIPLINE IDENTIFICATION TOOL

WPF No.: 1-C91-EPR-SW.01 Rev. 3	Title/Description: Control and Disposition of Incidental Waters		Date: 7/1/03
Specific work location: Site			<b>DISCIPLINE</b>
Does the work activity:	Yes	No	
1. Affect AB credited structures, systems or components, or could affect an AB control, such as Technical Safety Requirements, Administrative Controls, or Design Features, as well as systems that support credited systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Nuclear Safety
2. Occur in an area that has or has had radioactive material (including samples), radioactive contamination, airborne contamination, or radiation generation devices? Require the unrestricted release of radioactive waste or the characterization of radioactive waste?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Radiological Engineering & Radiological Operations
3. Occur in any area that has, has had, or has the potential to contain fissionable material, or involves the movement or handling of nuclear material?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Criticality Safety
4. Require design basis modifications, design or other engineering assistance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Engineering
5. Occur in a RCRA/CERCLA regulated area? Impact a regulatory permit? Being performed pursuant to RFCA or other federal compliance acts or agreements? Involve disturbance of soils, roads, or foundations? Occur in the buffer zone? Require an Environmental Checklist?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental Compliance
6. Create regulated waste, non-routine sanitary, including hazardous, radioactive, and/or mixed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waste Operations
7. Involve nuclear material (including holdup, surface contaminated objects, and low-specific activity waste)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material Controls and Accountability
8. Occur in an area that provided protection of or access to SNM or classified matter? Provides physical or administrative access controls or boundaries of security areas? Involves the installation, modification, or removal of door or motion alarms? Has the potential to impact security area controls and/or systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Security
9. Have the potential to expose the worker to occupational safety or industrial hygiene related hazards that are identified in the OS&IH PM, such as those identified in Chapter 3, Section 2.2.2, H&S Involvement?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Health and Safety
10. Involve spark, flame, or heat producing equipment? Involve explosives, flammable gasses, or pyrophoric material? Involves the protection from fires or fire notification (e.g. fire walls, alarms, sprinkler systems, etc)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fire Protection
11. Includes any activities identified in Chapter 3, Section 2.2.3, QA Involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Quality Assurance
12. Does this work involve an AB credited or AB defense in depth system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	System Engineer
13. Involves the packaging or movement of materials (including samples) within a building or transfer of materials or waste outside of a building? Materials are defined as: Meet the definition of a Department of Transportation hazard class. Radioactive per the Site Radiological Control Manual. Unique size and weight concerns for transport outside of a building. This covers material that will be packaged for transfer outside the building or packaging material to be shipped off Site without further repackaging, or does not have an approved Waste Generating Instruction or an approved procedure for packaging or transfer. This does not apply to movement of material within a building for day-to-day operations.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Packaging & Transportation